

MAY 4 RECD

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

500A Chestnut Street Tower II

May 2, 1983

Mr. James R. Tourtellotte, Chairman
Regulatory Reform Task Force
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

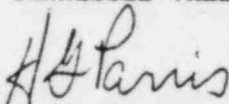
Dear Mr. Tourtellotte:

As stated in the March 15, 1983 letter from W. F. Willis, TVA is providing the enclosed cost data for NRC-required backfits on our Browns Ferry and Sequoyah Nuclear Plants. The figures represent our cost estimate for completion of the activity or for the life of the facility, as appropriate. The costs are actual cost spent to date plus future cost estimates based on 1983 dollars and include capital plus operating and maintenance costs.

These costs do not include those associated with extending scheduled outages due to backfits and modifications. The outage of a nuclear unit will require the operation of more expensive generating capacity, such as coal-fired units, or the purchase of power from a neighboring utility. For example, the torus modifications at Browns Ferry will prolong two outages on each unit. The first outages on these units have required 163 to 233 days and the second outages are scheduled to last 174 days. The cost of replacement power during the most recent outage was \$261,389 a day. A scheduled outage without a major backfit should require 61-66 days. The cost of replacement power due to the impact on the outage duration for the torus modifications will probably exceed the \$111 million shown for the capital cost of the backfit.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



H. G. Parris
Manager of Power

Enclosure

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PDR REVGP NRQREG
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BROWNS FERRY NUCLEAR PLANT
BACKFIT COSTS
 (ESTIMATED COST FOR COMPLETION)

<u>Description</u>	<u>Cost</u> <u>(\$000)</u>
Radiation Protection Plans for Nuclear Power Reactor Licensees (NUREG-0761)	2,200
Retraining of Personnel in Nuclear Facilities	2,750
Quality Assurance and Quality Control of Data from Oper Labs	28
Writing Operating Procedures and Changes to Existing Procedures	5,500
Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Plants	1,200
Ensure State Meets Emergency Planning	7,500
Provide Temporary Instrumentation For Reactor Feedwater Nozzles	145
Environmental Qualification of Mechanical Equipment	55,000
Long-Term Costs - Spare Parts and Inventory Maintenance	3,500
Anticipated Transient Without Scram	20,000
Dose Calculation Requirements Radioactive Nuclides	4,500
Human Engineering Design Review Process	1,000
Meteorological Data Requirements (One Time)	1,350
Meteorological Data Requirements (Long Term)	825
Construction Offsite Emergency Operation Facility	460
Provide Technical Support Center	2,970
Provide Postaccident Monitoring System	50,000
Computer Hardware	38,500
Long-Term Lease Line Costs	31,800
Supplement Existing Containment Radiation Monitors	90

Iodine Radiation Monitor	110
Containment Radiation Monitor Installation	73
High-Range Effluent Monitor	117
Mark I Containment Integrity Modifications	111,000
Security Plan	2,000
Integrity of Safety-Related Piping Systems and Concrete Anchors	13,200
Upgrade Training Certification	12,650
Upgrading Paging and Evacuation System	371
Simulator (Initial Purchase Cost, Operations & Training)	4,400
Replace Switches with Analog Transmitters	3,034
IE Bulletin 79-01B	44,000
IE Bulletin 79-01B (Spares Inventory Maintenance)	4,400
IE Bulletin 80-06	250
NUREG 0799	5,000
Appendix R	30,000
Postaccident Sampling Facility	<u>15,000</u>
TOTAL	\$474,923

SEQUOYAH NUCLEAR PLANT

BACKFIT COSTS (ESTIMATED COST FOR COMPLETION)

<u>Description</u>	<u>Cost</u> <u>(\$000)</u>
RCS Venting	650
Primary Water Level Monitoring	2,860
Isolation of Lines on High Radiation	980
Radiation Monitoring - RHR	277
Postaccident Sampling Facility	10,000
INC Range of Effluent Monitoring	95
Small Break LOCA Analysis	498
Containment Pressure Monitoring	510
Technical Support Center	10,500
Regulatory Guide 1.97	12,445
Mainline Status Monitoring	2,925
Quality Pressure Relief Valves	189
Leakage Reduction Mkup/LD System	232
Postaccident Cleanup	15
Perm. H2 Fix Implementation	4,952
Containment Radiation Monitoring	824
Probabilistic Risk Assessment	575
Iodine Radiation Monitoring	3,045
Degraded Task Force	3,002
Main Control Room Detailed Review	635
NUREG-0737 - Pressure Relief Valve Stuck	59
IE Bulletin 79-02	70
Reanalysis by 79-14	1,875

NUREG-0577 Study	105
NUREG-0612 Study	84
NUREG-0588	10,000
NUREG-0588 (Spares Inventory Maintenance)	3,300
Security Block	8,000
Anticipated Transient Without Scram	7,600
NUREG-0761	2,200
Retraining of Personnel in Nuclear Facilities	2,500
Quality Assurance and Quality Control of Data from Operation Laboratories	28
Upgrade Training Certification (One Time)	500
Upgrade Training Certification (Life Time)	12,100
Meteorological Data Requirements (One Time)	1,320
Meteorological Data Requirements (Long Term)	83
Environmental Qualification of Mechanical Equipment	55,000
Long-Term Costs - Spares and Inventory Maintenance	2,200
NRC Regulatory Guide 1.13	4
Dose Calculation Requirements Radioactive Nuclides	3,025
Human Engineering Design Review Process	1,000
Simulator (Initial Purchase, Operations and Training)	4,400
Writing Operating Procedures and Changes to Existing Procedures	5,500
Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Plants	1,200
Ensure State Meets Emergency Planning	7,500
Appendix R	<u>500</u>
TOTAL	\$185,362